EXHIBIT D

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

DECLARATION OF RAHUL VIJH
REGARDING PROPOSED CONSTRUCTIONS AND
DEFINITENESS OF THE ASSERTED CLAIMS OF
U.S. PATENT NOS. 7,016,875, 7,257,581, AND 8,260,806

CXT SYSTEMS, INC.

vs.

ACADEMY, LTD.,
d/b/a ACADEMY SPORTS + OUTDOORS
Case No. 2:18-cv-000171-JRG (LEAD CASE)

and

PIER 1 IMPORTS, INC.
Case Nos. 2:18-cv-00172-JRG (CONSOLIDATED CASE)
THE CONTAINER STORE GROUP, INC.
Case Nos. 2:18-cv-00173-JRG (CONSOLIDATED CASE)
CONN'S, INC.
Case Nos. 2:18-cv-00231-JRG (CONSOLIDATED CASE)
FOSSIL GROUP, INC.
Case Nos. 2:18-cv-00232-JRG (CONSOLIDATED CASE)
J. C. PENNEY COMPANY, INC.
Case Nos. 2:18-cv-00233-JRG (CONSOLIDATED CASE)
SPECIALTY RETAILERS, INC.,
by change of name from STAGE STORES, INC.
Case Nos. 2:18-cv-00234-JRG (CONSOLIDATED CASE)
TAILORED BRANDS, INC.
Case Nos. 2:18-cv-00235-JRG (CONSOLIDATED CASE)

<u>MAY 8, 2019</u>

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I.   QUALIFICATIONS AND BACKGROUND INFORMATION

1.   My name is Rahul Vijh. I am over eighteen years of age and I would be competent to testify as to the matters set forth herein if I am called upon to do so.

2.   I have been retained by Brown Rudnick LLP, counsel for the Plaintiff CXT Systems, Inc. (hereinafter referred to as "CXT"), in connection with this action to consider how one of ordinary skill in the art to which the asserted patents in this action are directed would have understood (at the time of the invention) the claim terms set forth in this Declaration. I may also be asked to rebut the proposed constructions and/or indefiniteness of the asserted patents that Defendants Academy, Ltd., d/b/a Academy Sports + Outdoors ("Academy"), Pier 1 Imports (U.S.), Inc. and Pier 1 Services Company (collectively, "Pier 1"), Conn's, Inc. ("Conn's"), Fossil Group, Inc. ("Fossil"), J.C. Penney Corporation, Inc. ("JC Penney"), Specialty Retailers, Inc., ("Specialty"), and Tailored Brands, Inc. ("Tailored Brands") (Academy, Pier 1, Conn's, Fossil, JC Penney, Specialty, and Tailored Brands are collectively, "Defendants") have proposed in their claim construction disclosures.

3.   This Declaration contains my opinions with respect to the subject matter of this proceeding and with the understandings as set forth herein. I specifically reserve the right to formulate and offer additional or supplemental opinions based on any additional information, discovery, or evidence that may be provided or derived, future court rulings, or agreements between the parties, to the extent permitted by the Court.

4.   It is my understanding that CXT is currently asserting Claims 1-47 of U.S. Patent No. 7,016,875 (the "'875 Patent"); Claims 1-89 of U.S. Patent No. 7,257,581 (the "'581 Patent"), and Claims 1-27 of U.S. Patent No. 8,260,806 (the "'806 Patent") (collectively, the "Asserted Claims" or "Asserted Patents").

5.   I anticipate being called to provide expert testimony before the U.S. District Court for the Eastern District of Texas regarding my opinions formed, resulting from my review of the Asserted Patents, the relevant file histories, and other invalidity arguments or contentions raised by Defendants. If called, I will so testify.

6.   I am presently a Co-Founder at Copperpod IP LLC with offices at 14300 Riva Del Lago Drive, 1103, Fort Myers, FL 33907 and at 115 E 23rd Street, 3rd Floor -1510, New York, NY 10010, where I provide infringement research and discovery services related to patent litigation. I am also presently a Director at Carthaginian Ventures Private Limited with offices at Quarkcity SEZ, A-40, Phase 8B Ext., Mohali, Punjab, India 160059. Carthaginian Ventures is a technology research and due diligence services provider.

7.   I completed my Bachelor of Technology degree in Electrical Engineering from Indian Institute of Technology (IIT) Delhi in 2008, with a specialization in Operating Systems and Electronic Communications. Since 2015, I am also a certified Project Management Professional.

8.   Over the last 10 years, I have worked on over 110 patent infringement disputes, including more than 20 cases involving commercial websites, security and authentication methods, where I have provided patent infringement research, reverse engineering, product testing and code review services to plaintiff attorneys. I have also helped certain small-to-medium businesses and private equity groups improve and monetize e-Commerce websites as part of due diligence prior to acquisitions.

9.   I am well-versed with programming languages and platforms commonly used to create e-Commerce websites, including at least Hypertext Markup Language (HTML), Javascript, PHP: Hypertext Preprocessor (PHP) and Cascading Style Sheets (CSS). I have

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designed websites using these languages as well as analyzed other products and websites that use these languages as part of my consulting work.

10.   Additionally, I am well-versed with programming languages and platforms commonly used to implement server-side functionality for such websites, including at least C/C++, Objective C, Java (including Java 2 Platform – Enterprise Edition (J2EE)) and ASP.NET, and to implement Structured Query Language (SQL)/SQLite/NoSQL databases through my undergraduate studies and subsequent consulting work.

11.   In addition to my consulting work involving similar technology and products, I have personally created and/or managed websites for my current and previous employers, namely Copperpod IP, LexInnova Inc. and iRunway, Inc., all of which involved using HTML, Javascript PHP and CSS for designing the websites, Java and SQL/NoSQL for implementing server-side functionalities, and integration with third-party payment gateways, such as PayPal, similar to the technologies at issue in the present matters.

12.   In forming my opinions, I rely on my knowledge and experience in the fields relevant to this Declaration. I further rely on documents and information referenced in this Declaration.

13.   A more detailed account of my work experience and other qualifications is listed in my Curriculum Vitae attached to this Declaration.

14.   I am being compensated for my work in this litigation at my standard consulting rate. I am also reimbursed for all reasonable expenses that I incur in due course of this work. My compensation does not depend upon the results of my analysis or the substance of my testimony. Nor does my compensation depend on the outcome of this litigation or any related proceeding,

and it is not based on the result of any issue in this litigation. I have no personal interest in the outcome of this litigation.

II. UNDERSTANDING OF THE APPLICABLE LAW

15.   I understand that claim terms should be given their ordinary and customary meaning within the context of the patent in which the terms are used, *i.e.*, the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention in light of what the patent teaches, unless it appears that the inventors were using them to mean something else. Additionally, the specification and prosecution history must be consulted to confirm whether the patentee has acted as his/her own lexicographer (*i.e.*, provided special meaning to any disputed terms), or intentionally disclaimed, disavowed, or surrendered any claim scope).

16.   I understand that a person of ordinary skill in the art is deemed to read a claim term not only in the context of the particular claim in which the disputed term appears, but also in the context of the entire patent, including the specification and the prosecution history. The prosecution file history provides evidence of how both the Patent Office and the inventors understood the terms of the patent, particularly in light of what was known in the prior art. Further, where the specification describes a claim term broadly, arguments and amendments made during prosecution may require a more narrow interpretation. For these reasons, the words of the claim must be interpreted in view of, and be consistent with, the entire specification. The specification is the primary basis for construing the claims and provides a safeguard such that correct constructions closely align with the specification. Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim as set forth in the patent itself.

17.   I understand that, to determine how a person of ordinary skill would understand a claim term, one should look to those sources available that show what a person of skill in the art would have understood disputed claim language to mean. Such sources include the words of the claims themselves, the remainder of the patent's specification, the prosecution history of the patent (all considered "intrinsic" evidence), and "extrinsic" evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art. I understand that one looks primarily to the intrinsic patent evidence, but extrinsic evidence may also be useful in interpreting patent claims when the intrinsic evidence itself is insufficient.

18.   Additionally, the context in which a term is used in the Asserted Claims can be highly instructive. Likewise, other claims of the patent in question, both asserted and not asserted, can inform the meaning of a claim term. For example, because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims. Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.

19.   I understand that, while intrinsic evidence is of primary importance, extrinsic evidence, *e.g.*, all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises, can also be considered. For example, technical dictionaries may help one better understand the underlying technology and the way in which one of skill in the art might use the claim terms. Extrinsic evidence should not be considered, however, divorced from the context of the intrinsic evidence. Evidence beyond the patent specification, prosecution history, and other claims in the patent should not be relied upon unless the claim language is ambiguous in light of these intrinsic sources. Furthermore, while

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extrinsic evidence can shed useful light on the relevant art, it is less significant than the intrinsic record in determining the legally operative meaning of claim language.

20.   I understand that the Supreme Court of the United States has instructed that in order for a claim to be definite, "a patent's claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty." The Supreme Court also warned that "the definiteness requirement must take into account the inherent limitations of language . . . Some modicum of uncertainty . . . is the price of ensuring the appropriate incentives for innovation." The Court also stated that "a patent must be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them."

21.   I understand that a patent claim may be expressed using functional language. Section 112, Paragraph 6, provides that a structure may be claimed as a "means . . . for performing a specified function" and that an act may be claimed as a "step for performing a specified function." There is a rebuttable presumption that § 112, ¶ 6 applies when the claim language includes "means" or "step for" terms, and that it does not apply in the absence of those terms. The presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function.

22.   When it applies, § 112, ¶ 6 limits the scope of the functional term to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof. Construing a means-plus-function limitation involves multiple steps. The first step is a determination of the function of the means-plus function limitation. The next step is to determine the corresponding structure disclosed in the specification and

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equivalents thereof. A structure disclosed in the specification is "corresponding" structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim. The focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is clearly linked or associated with the recited function. The corresponding structure must include all structure that actually performs the recited function. However, § 112, ¶ 6 does not permit incorporation of structure from the written description beyond that necessary to perform the claimed function.

23.   For § 112, ¶ 6 limitations implemented by a programmed general purpose computer or microprocessor, the corresponding structure described in the patent specification must include an algorithm for performing the function. The corresponding structure is not a general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.

24.   I understand that, in general, a term or phrase found in the introductory words of the claim, the preamble of the claim, should be construed as a limitation if it recites essential structure or steps, or is necessary to give life, meaning, and vitality to the claim. Conversely, a preamble term or phrase is not limiting where a patentee defines a structurally-complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention. In making this distinction, one should review the entire patent to gain an understanding of what the inventors claimed they actually invented and intended to encompass by the claims.

25.   I understand that language in the preamble limits claim scope (i) if dependence on a preamble phrase for antecedent basis indicates a reliance on both the preamble and claim body

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to define the claimed invention; (ii) if reference to the preamble is necessary to understand limitations or terms in the claim body; or (iii) if the preamble recites additional structure or steps that the specification identifies as important. Otherwise, the preamble is not limiting.

26.   It is also my understanding that method claims do not generally require the cited steps to take place in any particular order.

27.   Other considerations I made, detailed below, help one to achieve a proper interpretation of the claims.

III.   LEVEL OF ORDINARY SKILL IN THE ART

28.   It is my understanding that I must address the issues set forth in this Declaration from the viewpoint of a person of ordinary skill in the art ("POSITA") at the time of the invention to which the Asserted Patents pertain.

29.   It is my opinion that the person of ordinary skill in the art would have a bachelor's degree in computer science, or equivalent, with one to two years of experience in the designing e-Commerce websites. Extensive experience and technical training may substitute for educational requirements, while advanced education, such as a relevant MS or PhD, might substitute for experience. I also understand that the Asserted Patents issued from applications that claimed priority to applications filed in the August to November 2000 period and that is the relevant time period from which a person of ordinary skill in the art would evaluate the disclosure of the Asserted Patents. Further, even if the relevant time period were later, such as August to October 2001 time frame, this would not affect the opinions I set forth in this declaration.

30.   I myself, based on my education and experience as described above, would exceed the qualifications and background of a POSITA.

IV.   CLAIM CONSTRUCTION

A.   **"processing module [for processing]"** ('581 Patent, Claims 17, 33, 36, 38, and 72 and '806 Patent, Claims 8 and 18)

31.   The term "processing module [for processing]" appears in Claims 17, 33, 36, 38, and 72 of the '581 Patent and Claims 8 and 18 of the '806 Patent. I understand that Defendants contend that this term is indefinite, while CXT contends that it is definite and that no construction is necessary.

32.   For example, Claim 17 of the '581 Patent recites "passing the selected consumer information elements to a processing module executed by the vendor server" and Claim 8 of the '806 Patent recites "passing the one or more consumer information elements to a processing module executed by the vendor server." In addition to the aforementioned claims, this term appears within the specifications: "The vendor server 114 may then process the consumer information, as needed, by way of a processing module" ('581 Patent at 9:18-20); "The DBMS 109 or other program module executed by the host server 108 may be responsible for decrypting the search result." ('806 Patent at 8:29-31).

33.   Based on such a disclosure, a POSITA would understand the scope of this term with reasonable certainty. In the context of the '581 and '806 Patents, the plain and ordinary meaning of this term would be readily understood by a POSITA to signify certain code which may then be executed by a relevant processing entity.

34.   Therefore, in my opinion a POSITA would understand that the term "processing module [for processing]" is definite and that no construction is necessary.

B.   **"application configured to manage a request/response process"** ('806 Patent, Claims 1, 11, 19, and 27)

35.   The term "application configured to manage a request/response process" appears in various forms in claims 1, 11, 19, and 27 of the '806 Patent.

36.   CXT maintains it is definite and that no construction is necessary.   I also understand that Defendants believe that this term invokes § 112, ¶ 6 and that it is indefinite.

37.   A POSITA would understand that this term lacks the "means for" language such that a rebuttable presumption exists that § 112, ¶ 6 is not invoked.   Further, a POSITA would understand that these claims denote sufficiently definite structure for performing the function and, therefore, do not invoke § 112, ¶ 6. A POSITA would also understand that the relevant function is "managing a request/response process."   The claims themselves then provide sufficiently definite structure for performing the function in the form of a two-step algorithm. For example, Claims 1, 11 and 19 comprise the following two steps: (1) transmitting over the distributed electronic network from the network device a request for the determined one or more consumer information elements, the request including consumer authentication information and being made by the network device responsive to an input command supplied by the consumer; and (2) receiving at the network device the one or more consumer information elements filtered from the information account. Meanwhile, Claim 27 comprises two materially similar steps.

38.   The above algorithm discloses sufficient structure to allow a POSITA to implement its steps in light of the disclosure in the specification. A POSITA would know how to transmit over the distributed electronic network from the network device a request for the determined one or more consumer information elements, the request including consumer authentication information and being made by the network device responsive to an input command supplied by the consumer: "At step 510, the user authentication information is combined with vendor authentication information and is sent to the DBMS 109." ('806 Patent, 14:14-16.) A POSITA would also know how to receive at the network device the one or more consumer information elements filtered from the information account: "Then, at step 520, the

resulting information elements are transmitted to the client-side application 105, for example in the form of an XML data stream." ('806 Patent, 14:46-49.)

39.   More generally, a POSITA would also understand how to transmit information in a distributed electronic network. *See, e.g.,* '806 Patent at 5:31-35 ("Generally, a network device includes a communication device for transmitting and receiving data and/or computer-executable instructions over the network 106. . ."); *Id.* at 7:55-56 (". . . transmitted over an open network using any appropriate protocol.")

40.   Even if this claim term were subject to § 112, ¶ 6, the specification comprises sufficient support for the structure corresponding to the function of "managing a request/response process." A POSITA would understand that the relevant structure is a client device implementing the disclosed algorithm of Figs. 5 and 6 including steps 510, 520, 544, 616, 626, 634 which correspond to the relevant request and responses. (*See, e.g.*, '806 13:42-17:44). Notably, a POSITA would understand that the relevant structure would not be limited to a JAVA applet as Defendants have contended in their proposed alternative construction: "JAVA applets are well known client-side applications and are particularly suited for use in various embodiments due to their platform-independent nature. However, any other type of client-side application may be used without departing from the spirit and scope of the present invention." ('806, 7:17-22).

41.   Therefore, in my opinion a POSITA would understand the scope of the term "application configured to manage a request/response process" with reasonable certainty such that it is a definite term. Further, a POSITA would understand this term by its plain and ordinary meaning based on the language of the claims as a whole such that § 112, ¶ 6 is not invoked.

   C.   **"server-side application for interacting with the central data repository"** ('806 Patent, Claim 6)

42.   This term appears in Claim 6 of the '806 Patent. I understand that Defendants have asserted that this claim invokes § 112, ¶ 6 and is indefinite, while CXT has asserted that it is definite and that no construction is necessary.

43.   A POSITA would understand that this term lacks the "means for" language such that a rebuttable presumption exists that § 112, ¶ 6 is not invoked.

44.   If the Court, however, determines that this term is governed by § 112, ¶ 6, the relevant function would be "interacting with the central data repository" wherein interacting comprises communicating. Figure 1 shows the relationship between the network server and the central data repository:

FIG. 1
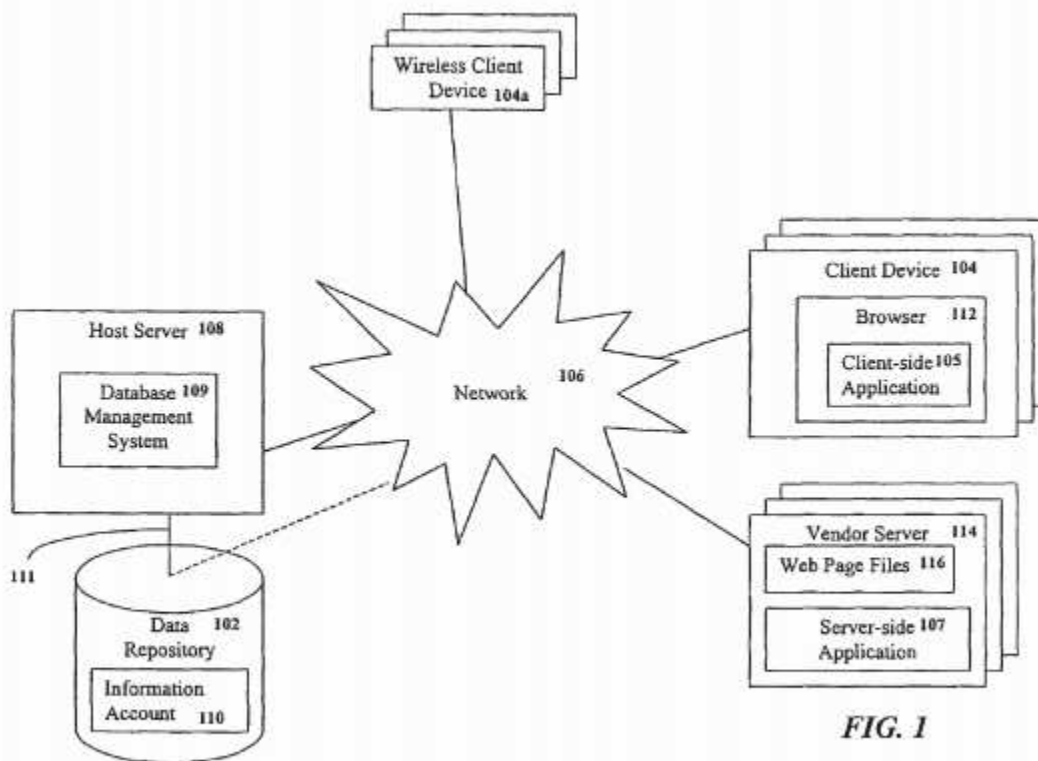
45.   The corresponding structure would be network server 108 transmitting messages to the central repository, as shown in Figs. 5, 6 and 7, including steps 510, 520, 536, 544 and corresponding portion of the specifications.

46.   A POSITA would also understand how to transmit information in a distributed electronic network. *See, e.g.,* '806 Patent at 5:31-35 ("Generally, a network device includes a communication device for transmitting and receiving data and/or computer-executable instructions over the network 106. . ."); *Id.* at 7:55-56 (". . . transmitted over an open network using any appropriate protocol.")

47.   Therefore, in my opinion a POSITA would understand the scope of this term with reasonable certainty such that it is definite. Further, it is my opinion that a POSITA would understand this term by its plain and ordinary meaning such that a construction is not necessary.

D.   "server-side application for interacting with a database management system" ('806 Patent, Claims 16 and 24 and '581 Patent, Claims 13-16, 18-19, 31-32, 34-36, 39-41, 45-47, 68-71, and 73-74)

48.   This claim term is present in the '806 Patent, Claims 16 and 24 and the '581 Patent, Claims 13-16, 18-19, 31-32, 34-36, 39-41, 45-47, 68-71, and 73-74.

49.   A POSITA would understand that this term lacks the "means for" language such that a rebuttable presumption exists that § 112, ¶ 6 is not invoked.

50.   If the Court, however, determines that this term is governed by § 112, ¶ 6, the relevant function would be "interacting with a database management system" wherein interacting comprises querying and receiving responses. Figure 1 shows the relationship between the host server and the database management server:

FIG. 1
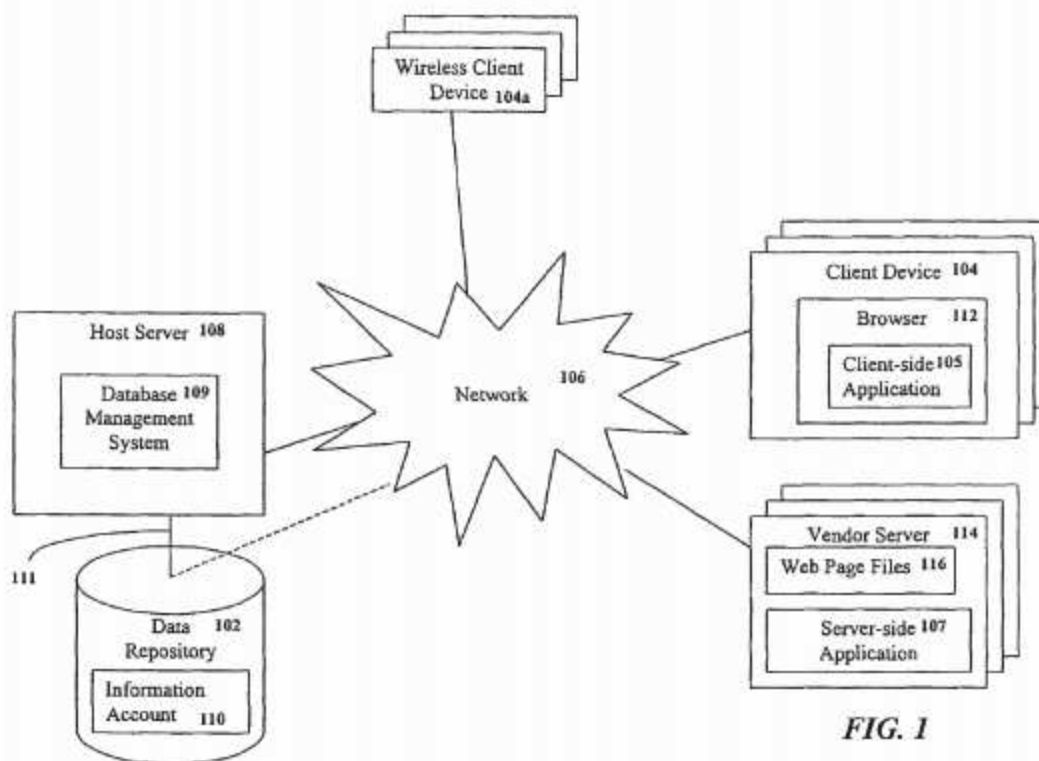
51.   The corresponding structure would be network server 108 implementing the algorithm, as shown in Figs. 5, 6 and 7, including steps 510, 520, 536, 544, 626, 634 and corresponding portion of the specifications.

52.   Of note, the specifications teach that

In such embodiments, the vendor server may execute a server-side application for interacting with the database management system of the host server.

'806 Patent at 2:56-59 and '581 Patent 2:58-61

After determining the type of consumer information that is required, the client-side application 105 may formulate a database query in a language that is understood by the DBMS 109. At a minimum, client-side application 105 communicates enough information to the DBMS 109 regarding the required consumer information so that the DBMS can formulate a database query. In one embodiment, the DBMS 109 exposes an

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application program interface ("API") that can be utilized by the client-side application 105. An example of one such API is known as the Simple Object Access Protocol ("SOAP"). SOAP is a protocol that provides for interoperability between heterogeneous HTTP-based software and XML-based software. SOAP provides access to services, objects, and servers in a platform-independent manner. Since SOAP relies on HTTP as the transport mechanism, and most firewalls allow HTTP to pass through, SOAP endpoints may usually be invoked from either side of a firewall.

'806 Patent at 7:56-8:29 and '581 Patent at 8:7-24

The server-side application may be identified by an application identifier ("APPID"). The APPID may be associated at the host server 108 (e.g., by the DBMS 109) with a particular filtering mechanism. . . In response to authenticating the server-side application 107 and identifying the appropriate filter, consumer information may be filtered from the information account 110 and transmitted back to the server-side application 107. The server-side application 107 may then parse the consumer information, for example, in order to auto-populate a form, which may or may not have been previously displayed to the consumer.

'806 Patent at 10:9-21 and '581 Patent at 10:25-37

Alternative embodiments employing a server-side application 107 instead of the client-side application 105 have been discussed above. Those skilled in the art will appreciate the differences between the interactions involving a client-side application 105 and a server-side application 107.

'806 Patent at 15:45-50 and '581 Patent at 14:3-7

53.   Based on this disclosure, a POSITA would understand how to implement the relevant queries between the server-side application and the DBMS.

54.   Therefore, in my opinion a POSITA would understand the scope of this term with reasonable certainty such that it is definite. Further, it is my opinion that a POSITA would understand this term by its plain and ordinary meaning such that a construction is not necessary.

E.   "application configured to manage the request/response process"
('581 Patent, Claims 4 and 25)

55.   The term "application configured to manage the request/response process" appears in Claims 4 and 25 of the '581 Patent.

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56.   CXT maintains that this term is definite and that no construction is necessary. I also understand that Defendants believe that this term invokes § 112, ¶ 6 and that it is indefinite.

57.   A POSITA would understand that this term lacks the "means for" language such that a rebuttable presumption exists that § 112, ¶ 6 is not invoked.

58.   Even if this claim term were subject to § 112, ¶ 6, the specification comprises sufficient support for the structure corresponding to the function of "managing a request/response process." A POSITA would understand that the relevant structure is a client device implementing the disclosed algorithm of Figs. 5 and 6 including steps 510, 520, 544, 616, 626, 634 which correspond to the relevant request and responses. (*See, e.g.*, '581 Patent, 14:8-18:18). Notably, a POSITA would understand that the relevant structure would not be limited to a JAVA applet a: "JAVA applets are well known client-side applications and are particularly suited for use in various embodiments due to their platform-independent nature. However, any other type of client-side application may be used without departing from the spirit and scope of the present invention." ('581 Patent, 7:30-35).

59.   Therefore, in my opinion a POSITA would understand the scope of the term "application configured to manage a request/response process" with reasonable certainty such that it is a definite term. Further, a POSITA would understand this term by its plain and ordinary meaning based on the language of the claims as a whole such that § 112, ¶ 6 is not invoked.

F.   **"propagated signal"** ('875 Patent, Claims 40-47)

60.   The term "propagated signal" appears in Claims 40-47 of the '875 Patent.

61.   CXT maintains that it should mean "the determination that the previous authentication of the consumer providing the consumer with access to the information account remains valid," while Defendants content that it is indefinite. In my opinion, a POSITA would

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understand this term to mean "the determination that the previous authentication of the consumer providing the consumer with access to the information account remains valid."

62.   The '875 Patent discloses that, "[a]s used herein, the term 'computer-readable medium' describes any form of computer memory or a propagated signal transmission medium. Propagated signals *representing data and computer-executable instructions are transferred between network devices*." '875 Patent at 6:25-29.

63.   The '875 Patent uses the term "propagated signal" as follows in exemplary Claim 40: "The *propagated signal of claim 39*, wherein the previous authentication of the consumer remains valid if the consumer initiates the second request for access to the information account prior to the occurrence of a terminating event."

64.   Accordingly, a POSITA would understand "propagated signal" to refer to the specific data and computer-executable instructions transferred between network devices in the system of Claim 39, for "for providing access to an information account stored in a central data repository that is accessible via a distributed network." '875 Patent, Claim 39.   Claim 39 discloses data and computer-readable instructions transferred between network devices comprising, "communicating with a host server to determine that a previous authentication of the consumer providing the consumer with access to the information account remains valid." *Id.* Accordingly, this "communication" is a "propagated signal" as defined in the ""875 Patent specification.

65.   Thus, a POSITA would understand "propagated signal," as used in those claims depending from independent Claim 39, to mean "the determination that the previous authentication of the consumer providing the consumer with access to the information account

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remains valid."   Further, a POSITA would understand the scope of this term with reasonable certainty such that it would be definite.

      G.   **"in response to authenticating the consumer, invoking a single sign-on mechanism so that the consumer will not be required to resubmit the consumer authentication information upon accessing a subsequent web page file prior to expiration of a timeout period"** and **"single sign-on [mechanism / feature / function]"** ('581 Patent, Claims 2 and 43 and '875 Patent, Claims 7, 13-16, 20-21, 36-38, and 44)

66.   The terms "in response to authenticating the consumer, invoking a single sign-on mechanism so that the consumer will not be required to resubmit the consumer authentication information upon accessing a subsequent web page file prior to expiration of a timeout period" and "single sign-on [mechanism / feature / function]" appear in Claims 2 and 43 of the '581 Patent and Claims 7, 13-16, 20-21, 36-38, and 44 of the '875 Patent.

67.   In my opinion, a POSITA would construe the term "single sign-on [mechanism / feature / function]" of the '875 Patent to mean "a mechanism that allows the consumer to provide authentication information to access his information account at only a first website, and then automatically re-authenticates the consumer at subsequent *websites*."   Additionally, a POSITA would construe the term "in response to authenticating the consumer, invoking a single sign-on mechanism so that the consumer will not be required to resubmit the consumer authentication information upon accessing a subsequent web page file prior to expiration of a timeout period]" of the '581 Patent to mean "a mechanism that allows the consumer to provide authentication information to access his information account at only a first website, and then automatically re-authenticates the consumer at subsequent *web page files*."

68.   I understand that Defendants have advocated for a construction that requires a "a mechanism that allows the consumer to provide authentication information to access his information account at only a first website, and then ***uses applet technology to*** automatically re-

authenticate the consumer at subsequent websites." I disagree. A POSITA would not understand this term to be limited to applet technology.

69. I note that while the '875 Patent discloses that "Applets (*e.g.*, JAVA applets) are particularly well-suited for use as client-side applications" in a preferred single sign-on mechanism ('875 Patent at 22:50-55), it also explicitly states that "***any other type of client-side application*** may be used without departing from the spirit and scope of the present invention." *Id.* at 7:53-55. The '581 Patent includes an identical disclosure, noting that "JAVA applets are well known client-side applications and are particularly suited for use in various embodiments due to their platform-independent nature. However, any other type of client-side application may be used without departing from the spirit and scope of the present invention. *Id.* at 7:30-35.

70. Additionally, Claims 2 and 43 of the '581 Patent refer to subsequent webpage files and not subsequent websites. Accordingly, the proposed construction for these terms across the '581 Patent and '875 Patent are adjusted.

71. Accordingly, a POSITA would not understand "single sign-on [mechanism / feature / function]" to require "applet technology," and would instead construe the term to mean "a mechanism that allows the consumer to provide authentication information to access his information account at only a first website, and then automatically re-authenticates the consumer at subsequent websites."

H. **"decrypted format via a secure network connection"** ('581 Patent, Claims 12, 15, 47, 54, 67, and 70)

72. The term "decrypted format via a secure network connection" appears in the '581 Patent, Claims 12, 15, 47, 54, 67, and 70.

73. In my opinion, a POSITA would construe this term to have its plain and ordinary meaning.

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74.   I understand that Defendants have advocated for a construction that requires a "decrypted format via a private network connection." I disagree. A POSITA would understand that it is not necessary that a "secure" network be "private." Accordingly, a POSITA would not construe this term to be so limiting.

75.   I note that the '581 Patent states, "[a]s shown, a central data repository 102 is provided for storing consumer information that may be easily accessed from any network device attached to the network 106. The network 106 may comprise any telecommunication and/or data network, *whether public or private*." '581 Patent at 5:22-26. The '581 Patent further states, regarding communications over network 106, that "[c]ommunications relating to authentication information may be accomplished using a secure transmission protocol or handshake, such as the secure shell BSD, Point to Point Tunneling Protocol (PPTP), also commonly know [*sic*] as Virtual Private Network, and/or secure socket layering (SSL) protocol. *Other methods for achieving a secure connection over the network 106 will be apparent to those of ordinary skill in the art*. Authentication information may also be encrypted *and transmitted over an open network* using any appropriate protocol." *Id.* at 7:61-8:3.

76.   Accordingly, a POSITA would construe this term to have its plain and ordinary meaning and not be limited as Defendants urge.

I.   "subsequent website" ('875 Patent, Claims 1, 17 and 27) / **"web-site"** / **"website"** / **"web site"** ('875 Patent, all Claims and '581 Patent, Claims 84-87)
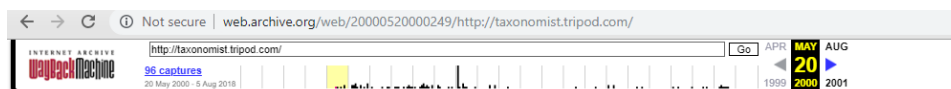
77.   The claim terms "subsequent website" / "web-site" / "website" / "web site" appears in all claims of the '875 Patent and in '581 Patent, Claims 84-87. In my opinion, a POSITA would construe these terms to have its plain and ordinary meaning.

78.   I understand that Defendants have advocated for a construction for "subsequent website" that recites "a group of webpages associated a domain name that is different from the

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initial domain name, including any of its subdomains."   I disagree.   A POSITA would not understand this term to be so limiting.

79.   I note that the term "subsequent website" appears in the specification only twice, in the following passage: "Since a consumer's information account 110 may be accessible from more than one website, the authentication status may be handled in such a way so as to "follow" the consumer as the consumer accesses *subsequent websites*. At such *subsequent websites*, a consumer who has activated the single sign-on mechanism need not re-enter authentication information, assuming certain conditions are present." '875 Patent at 22:30-38.

80.   The term, as used here, does not impart the limitations that such a "subsequent website" be "a group of webpages," nor would a POSITA understand the term "subsequent" (*i.e.*, loaded after authentication) to require a domain name "different from the initial domain name." A POSITA would understand that it is possible for a single domain to host multiple "websites." For example, multiple entities may host distinct websites that are hosted from the same domain, such as multiple websites hosted from the tripod.com, including ones available at least during the August to November 2000 timeframe. Examples of such clearly different websites are shown below.

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http://taxonomist.tripod.com (as on May 20, 2000)

http://malawi.tripod.com (as of August 16, 2000)

http://megmatthews.tripod.com (as on October 2, 2000)
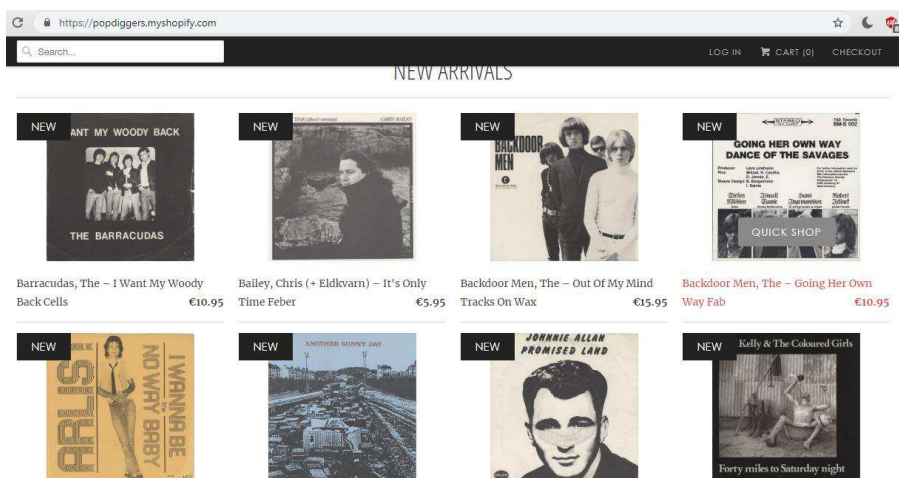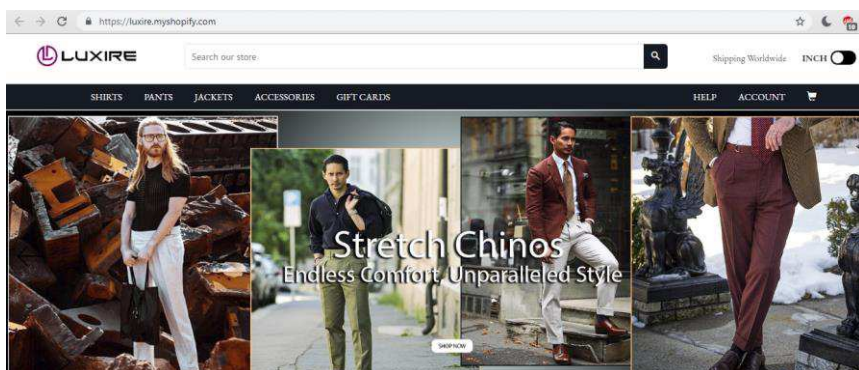
81.   Further examples of clearly distinct websites, including e-Commerce websites, that are hosted from the same domain include web-stores being hosted from the myshopify.com or wixsite.com domain. *See* https://help.shopify.com/en/manual/domains ("*By default, your primary domain is in the form of examplestore.myshopify.com")* and https://support.wix.com/en/article/building-a-website-for-free, ("*Free Wix domain - (username.wixsite.com/siteaddress)*"). Examples of such clearly different websites are shown below.

https://popdiggers.myshopify.com/

https://luxire.myshopify.com/

http://shoeplushllc.wixsite.com/shop-shelyn-fashion

https://bluewagecom.wixsite.com/bluewage/
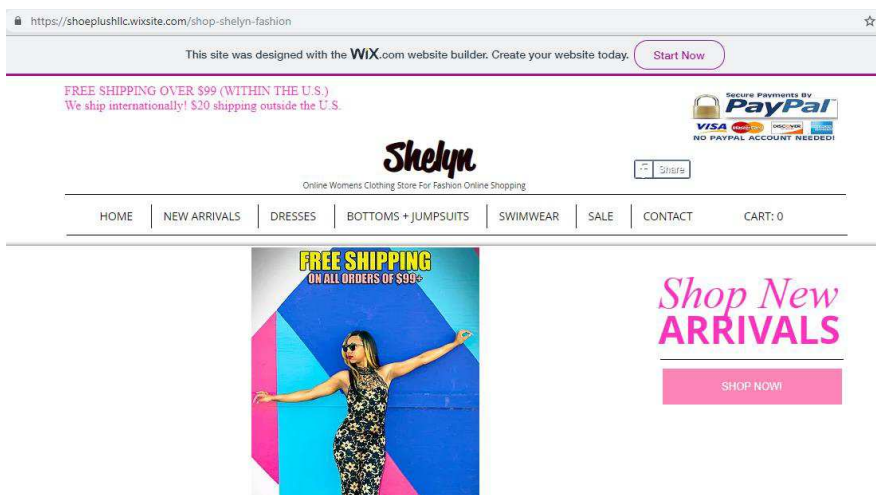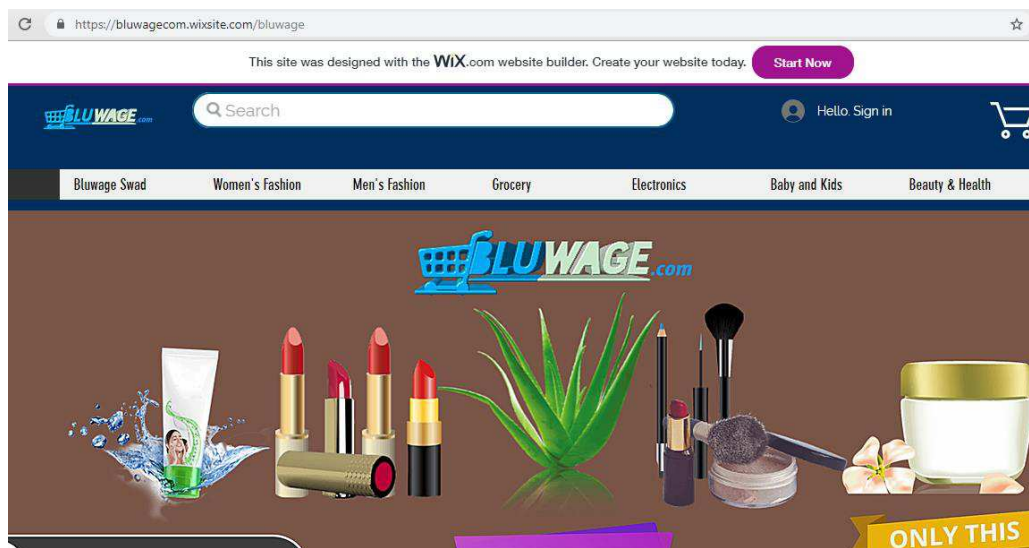
82.   Accordingly, in my opinion, a POSITA would understand this term by its plain and ordinary meaning.

J.   "access to the information account" ('875 Patent, Claim 27)

83.   The "access to the information account" term appears in Claim 27 of the '875 Patent.

84.   In my opinion, a POSITA would construe this term to mean "ability to retrieve information from the information account, based on having been authenticated."

85.   I understand that Defendants have advocated for a construction that requires, "ability to instruct the DBMS to retrieve information from the information account, based on having been authenticated." I disagree. A POSITA would understand that it is not necessary to "instruct the DBMS to retrieve information," to access the account.

86.   The '875 Patent discloses, "a system and method . . . for enabling consumers to store and maintain a comprehensive information profile (hereinafter "information account") in a centralized data repository." '875 Patent at 4:19-24. Additionally, "[t]he host server 108 may

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interact with the central data repository 102 via the network 106 *or via a direct communication link 111*." '875 Patent at 6:38-40. Thus, the '875 Patent explicitly discloses embodiments in which a host server does not interact with a data repository through an intermediary server, such as a database management server ("DBMS").

87.   Therefore, in my opinion a POSITA would understand this term to mean "ability to retrieve information from the information account, based on having been authenticated."

K.   "temporary portion" and "client-side application having at least a temporary portion" (the '806 Patent, Claims 1, 11, 19, 27, the '581 Patent, Claims 4, 25, 50, and the '875 Patent, Claim 7)

88.   This claim term is present in the '806 Patent, Claims 1, 11, 19, 27, the '581 Patent, Claims 4, 25, 50, and the '875 Patent, Claim 7.

89.   In my opinion, POSITA would understand this term to mean "a portion of an application that is specific to the browser session only and removed from the client device memory after its execution."

90.   Defendants contend that a temporary portion means "a portion of an application that is specific to the browser session only and removed from the client device after its execution." I disagree. Defendants' construction would require that a "temporary portion" include client device storage (*i.e.*, a hard drive), whereas a POSITA would understand "temporary portion" to refer to extend to client device memory (*i.e.*, RAM).

91.   The '875, '581, and '806 Patents each explicitly state that "[t]he client-side application **105** resides in *temporary memory storage of the client device 104, such as cache memory or the like,* and may be removed from the client device **104** after its execution is complete." '806 Patent at 7:22-25; '581 Patent at 7:35-38; and '875 Patent at 7:55-58.

92.   Accordingly, a POSITA would understand a "temporary portion" of a client-side application, to refer to the same "temporary memory storage . . . such as cache memory," as opposed to permanent storage, such as a hard drive.

93.   Therefore, a POSITA would understand this term to mean "a portion of an application that is specific to the browser session only and removed from the client device memory after its execution."

L.   **"host servers"** ('875 Patent, Claim 17)

94.   This claim term is present in the '875 Patent, Claim 17.   In my opinion, a POSITA would understand the term "host servers" to mean "host server".   Additionally, a POSITA would understand the scope of this term with reasonable certainty.

95.   A POSITA would understand that "host servers" as used in Claim 17 of the '875 Patent means "host server."   The relevant part of Claim 17 states, "[a] computer-implemented method for accessing an information account stored in a central data repository that is accessible via a distributed network and is coupled to *a* host server*s*."   Due to the mismatch between the terms, and use of the term "host server" throughout the patent, a POSITA would recognize that "host servers" is a grammatical and/or typographical error, and should also be construed as "host server."

96.   Accordingly, in my opinion a POSITA would understand that "host servers" means a "host server."

M.   **"a web-site that is configured to provide access to the information account upon authentication of the consumer"** ('875 Patent, Claim 39)

97.   This claim term is present in the '875 Patent, Claim 39.

98.   I understand that Defendants have asserted that this claim invokes § 112, ¶ 6 and is indefinite, while CXT has asserted that it is definite and that no construction is necessary.

99.   In my opinion, a POSITA would understand the scope of the term "a web-site that is configured to provide access to the information account upon authentication of the consumer" with reasonable certainty.

100.   A POSITA would understand that this term lacks the "means for" language such that a rebuttable presumption exists that § 112, ¶ 6 is not invoked. Further, a POSITA would understand that this claim denotes sufficiently definite structure for performing the function and, therefore, does not invoke § 112, ¶ 6. A POSITA would also understand that the relevant function is to "provide access to the information account upon authentication of the consumer." The claim itself then provides sufficiently definite structure for performing the function in the form of a two-step algorithm. It comprises the following two steps: (1) wherein the client-side application automatically manages authentication of the consumer by communicating with a host server to determine that a previous authentication of the consumer providing the consumer with access to the information account remains valid and *to instruct the web-site to by-pass a sign-on interface that would otherwise prompt the consumer to input the consumer authentication information when the consumer initiates the request for access to the information account*; and (2) a client-side application configured for automatically managing authentication of the consumer at a network device *so that the consumer will not be required to input the consumer authentication information upon initiating a request for access to the information account while interacting with a web-site that is configured to provide access to the information account upon authentication of the consumer.*

101.   However, should the Court determine that this term is governed by § 112, ¶ 6 the relevant function would be: manage communications with the host server and automatically manage subsequent authentications of the consumer on behalf of the client device. Additionally,

the specification discloses the relevant structure: host servers 108, 104 implementing the

algorithm of Figs. 5, 6, and 7, including steps 510, 512, 518, 520, 538, 540, 542, 628, 630, 632,

710, and 718 and corresponding portions of specifications ('875 Patent, 22:60-26:25).

102.   Of note, the specifications teach

In certain embodiments as disclosed herein, a single sign-on mechanism (also referred to herein as a single sign-on feature) may be provided to allow a consumer to "sign-on' (i.e., to provide consumer authentication information as may be required) for authentication to securely access an information account 110 at a first website. since a consumer's information account 110 may be accessible from more than one website, the authentication status may be handled in such a way so as to "follow the consumer as the consumer accesses subsequent websites. At such subsequent websites, a consumer who has activated the single sign-on mechanism need not re-enter authentication information, assuming certain conditions are present.

'875 Patent at 22:25-37

At step 1106 the consumer authentication information, the browser identifier, the sign-on time and any other information associated with the sign-on process are stored in an authentication table 113, which is preferably maintained at the host server 108. Accordingly, the client-side application 105 may transmit the consumer authentication information, the browser identifier, the sign-on time, etc. to the host server 108. The host server 108 may utilize the database management system 109 for interacting with the authentication table 113. The authentication table 113 may alternatively be stored in another location accessible by the host server 108, such as the data repository 102, or another network server. Once authenticated, the consumer can access the information account 110 via the vendor web-site 114 using the client device 104.

'875 Patent at 23:62-24:9

As an example, the client-side application 105 may receive a message from the host server 108 indicating that the user's previous authentication status remains valid and may pass that message to the vendor server 108 or may generate an instruction that causes the vendor server 108 to by-pass any sign-on interface associated with the information account 110.

'875 Patent at 25:57-63

Although the single sign-on feature has, in certain instances, been described as being implemented by way of communications between the host server 108 and a client device 104 (e.g., via a client-side application 105), those skilled in the art will appreciate that single sign-on feature may alternately be implemented by way of communications between the host server 108 and a vendor server 114 that hosts a web-site configured to

provide access to the central data repository 102 upon authentication of the consumer. Analogously to execution of the client-side applications 105 by the client device 104, the vendor server 114 may execute one or more server-side applications 107 for managing communications with the host server 108 and conducting authentication thereby.

Accordingly, one or more server-side applications 107 may be configured to perform the functions of the single sign-on feature, or functions similar thereto, that are described above with respect to one or more client-side applications 105. In implementing the single sign-on feature through use of server-side applications 107, vendor authentication information and/or an equipment identifier or APPID associated with the vendor server 114 may be transmitted to the host server 108, as appropriate. The vendor server may also communicate with the client device to receive consumer authentication information and/or a browser identifier, if needed.
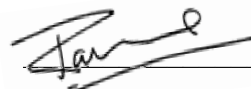
As mentioned, once the user is authenticated to access the information account 110, selected consumer information elements may be filtered from the information account 110 and integrated into a vendor's business process on behalf of the user. As an example, the selected consumer information elements may include authentication information (usernames, passwords, biometrics, etc.) that is needed to access secure areas of Vendor web-sites. Thus, after the user has successfully signed-on to the information account 110, subsequent authentications of the user for access to the information account 110 may be handled automatically by the single sign-on feature and other consumer authentication information may be auto-populated into sign-on interfaces of secure web-sites on behalf of the consumer.

'875 Patent at 26:1-39

103.   Therefore, in my opinion, a POSITA would understand the scope of the term "a web-site that is configured to provide access to the information account upon authentication of the consumer" with reasonable certainty. Further, in my opinion, this term does not invoke § 112, ¶ 6 such that there is no need to construe it.

V.   CONCLUSION

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 9, 2019.

Rahul Vijh